



## Carolina DX Association

N4PQX Bob Burton President  
 W4WNT Bill Turner Vice-Pres.  
 K4MQG Gary Dixon Sec.-Treas.  
 KA8FSM John Scott Editor

site and we had no choice but to shut it down until repairs could be made. We have purchased a new dual band antenna—one having a 135 mph wind survival rating. Gary Branch, N5BI, made a well-received donation of 300 ft of 7/8" Andrews Heliac to replace the existing feedline at this site. Thank you, Gary, for your generous donation. Since the antenna is mounted at 200+ feet, we are hiring a professional climber to install the new antenna and feedline. We expect to have W4DXA back on the air in mid-May, weather permitting. We regret the inconvenience this has caused, but due to the nature of the site we can only make repairs when people's schedules work out. Joe Simpkins, K4MD, is being joined by Paul Sturpe, W3GQ, who is working to become yet another PacketCluster "guru". Paul can be a real asset in keeping the W4DXA node up and running since he lives much closer to the site. We appreciate Paul volunteering to help improve the service at this node.

We continue work with Rick, NV5A, known as The SignMan of Baton Rouge, on setting up custom engraved name badges with the CDXA logo. The approved standard badge design will be 3 lines (call sign, first name, city/state) with rounded edges, in either blue with white lettering, or white with blue lettering. The fastener will be the standard pin type. Rick is in the process of setting up an ordering capability on his web page at <http://www.thesignman.com>. You will also be able to order via email, fax, or phone. We'll also provide a link on the CDXA web page to make the ordering process easy. Rick also has other badge options, badge fasteners, and products to which the approved CDXA logo design can be applied. Stay tuned for the go ahead on ordering, and look for the ordering link on the CDXA web page.

John Scott, KA8FSM, continues to work with Land's End on the custom embroidered items with the CDXA logo. John will have more on the current status later in the newsletter.

Don't forget CQWW WPX CW on May 26-28, Make sure to work the CDXA group at Ron Bailey's, AA4S, QTH using the WY2000 call. Ron is currently busy making preparations for the contest. Good luck to all the operators who participate on a successful contest. One last reminder, the Pileup is not published in June or December, so the next newsletter will be out in July. Until then, see you in the pileups...73's Bob – N4PQX

# The Pileup

## Newsletter of the CDXA

### Presidential Ponderings

Lots of DX news this month with A5 now on the air as I write this month's piece. Good luck to everyone needing A5 for a new one; propagation is not very good right now so let's hope it improves before the DXpedition is over. Also in the news is the 70 operation, which now may not count for DXCC credit. It seems there is a licensing conflict again. Keep tuned in to the usual news sources for the latest on this one.

Don't forget that John Devoldere, ON4UN, and author of Low Band DXing, will give a presentation on Monday May 15<sup>th</sup> at 7:30 p.m. at the Assembly Center, 111 Academy Street in Fort Mill, SC. This facility is adjacent to the Fort Mill Police Department. Free parking is available on Academy Street and behind the facility. For those traveling from the I-77 corridor, take Exit 85 in SC, then Highway 160 exit that will take you into downtown Fort Mill. The downtown area is located just a few miles from I-77. Don't miss this event.

As many of you are aware the W4DXA PacketCluster node has been down for some time. This node is located at a commercial tower site on Young Mountain, somewhat ENE of Mooresville. The problem has been identified as an antenna gone bad coupled with some less than perfect feedline. The node began interfering with the commercial equipment at the

CDXA PacketCluster & Other Communication Systems		
W4DXA Young Mountain	144.95 MHz (1200 bits/second)	441.00 MHz (9600 bits/second)
K4MD Charlotte, NC	144.91 MHz (1200 bits/second)	441.075 MHz (9600 bits/second)
Digipeater near Wingate, NC	144.91 MHz (DXWIN)	
CDXA Repeater 147.18 MHz (+600 )	Near Fort Mill, SC	
World Wide Web Homepage	<a href="http://www.CDXA.org">www.CDXA .org</a>	
Wednesday Luncheon (11:30 AM)	Shoney's, 355 Woodlawn Road, Charlotte, NC (704-525-4395)	

## CW WPX Contest Using WY2000 By Ron Bailey, AA4S

W4VHF, Ted Goldthorpe (a.k.a. "The Instigator") has struck again! This time suggesting that the WY2000 callsign be reactivated with a big effort in the CQ WPX CW contest May 26-28. Ted asked Joe (AA4NN) and me if we were interested. Joe was willing but said he could only run a single transmitter with, possibly, a multiplier station.

I, on the other hand, could set up a three transmitter operation by just rearranging (and borrowing) some equipment. This would serve as good practice for Field Day. So here goes.

First, a crew of operators is needed. I don't mean to exclude interested members from this effort, but CW skills must exceed 30 words per minute or the pileups would quickly become unmanageable. I speak from my January experience with this call on 12 and 30 meters. (This will not be a requirement for Field Day.) Operators also must be familiar with computer-based software and have reasonable typing skills.

I can set up two complete stations inside the house, but additional equipment is needed for a third station for 10 meters. Don Daso, K4ZA, has volunteered to bring his complete Ten-Tec station to fill that requirement. It will be set up in the garage and can be assembled quickly using the operating table, 120 and 240 volt receptacles, etc. already in place. The tower which supports the Hy-Gain 105CA at 62 feet is right beside the garage; feedline and rotator cable can easily be run to the station inside. I will attempt to install shielded cable to link three stations and the PacketCluster together.

One in-house station will be used on 160, 80, and 20 meters using an Icom IC-765 and an Ameritron AL-1500 amplifier. Antennas include verticals and inverted vees for both 160 and 80 meters; 7 beverage antennas 550 feet long are used for receiving. The 20m antenna is a Hy-Gain 205CA @ 90 feet. The second in-house station will be used on 40 and 15 meters using an Icom IC-765 with a Drake L-4B amplifier. A laptop computer is needed for logging at this station (preferable one with two COM ports.) I have a spare 286 monochrome laptop which could be used, but prefer to keep it as a spare. The main 40 meter antenna is a 4 element log-periodic yagi at 80 feet. The 15 meter antenna is a 4 element W2PV-designed yagi at 60 feet.

### Station Limitations:

1. The 40m and 20m antennas are on the same tower and share a rotator. A temporary elevated ground plane will be erected to deal with this if it becomes a problem. This has been done in the past.
2. There is occasional power line noise on 10m and sometimes on 15m between 340 and 40 degrees. I have been successful in using the noise blanker on the IC-765s to work around this problem.

3. It is hoped interference between stations can be minimized using I.C.E. bandpass filters. I have one which covers all bands. Don Crain, W4OC, has offered to loan me two more. We would like to have everything set up a week before to check things out. I will try to coordinate this.
4. I have a stove, a toaster oven, and a microwave—but I don't cook! You will either have to bring your own food or let me know what you like. Indoor plumbing IS available and the house is air conditioned. I'll let Don Daso tell you about the garage, HI!

Call me at (704) 487-0337 or send me a message via the PacketCluster if you are interested in operating. As of now operators consist of AA4NN, K4ZA, N4ZC, AA4S, and W4OC. Three or 4 more would make up an ideal crew.

### The Editor's Pen

It occurred to me the other day that our geographical distribution and lack of formal meetings, save two or three "events" per year, means that The Pileup is one of the principal ways some of our numbers "connect" to the CDXA.

Gary Bader, KD4RH, wrote asking that I publish the contest points earned by our club participants in major contests. Gary lives in Elgin, SC, southeast of Lancaster, and I don't think Gary and I have ever been at Shoney's at the same time. This newsletter is one way Gary connects.

Gary writes, "...how about including all of the contest results from the recent club competitions last fall? I would be interested in seeing the results. This may help to see how others stack up. I know that I can't compete with Roger (N4ZC), or Ron (AA4S), or Henry (N4UH), but I have a good time anyway. Also, this may encourage other CDXA members to operate and submit scores to help the overall club score." Both points are excellent.

I cannot canvass each and every one of you for whether you did or didn't contest. (I'm not retired yet and the editor's job keeps me always thinking!) How about a contest coordinator to gather this information? Are there any requirements by the contest sponsor to provide our "official contestants" in an event? Who'll step up?

I received **three** responses to the call for DXCC status. Well, I dug out some data another way—right or wrong.

An old favorite saw of mine is, "Many hands make for light work." My job has been made easier, and this paper has been made better by articles such as that seen to the left by Ron Bailey and the submission last month from Tripp Harris on Topo USA. From the Wednesday meetings, I know there are good ideas out there, and you all have lots to say. Let's make sure all CDXA members stay connected. John, KA8FSM

### CDXA's DXCC Lineup

In last month's issue of The Pileup, your editor asked for submissions of your personal entity counts in your chase of DXCC. Three submissions were sent. On the 147.18 repeater, I heard some of our members mention they did not realize ARRL has discontinued publishing the DXCC status in QST. My intent in publishing our very own list was twofold:

- The original QST honor roll makes it tough to find all of our folks because it is organized by entity count, and
- It is fun to judge how you are doing in the great hunt amongst those you know.

With only three submissions at press time, your undaunted editor laboriously picked all of the top CDXA members from the April, 1999 Honor Roll that he could identify by cross checking from last year's roster. If I've left your name off, or if last year's count is hopelessly outdated, forgive me, and get me the latest data! In case you didn't feel your entity count puts you in the elite class necessary for the CDXA "Honor Roll", look at the last name on the list and his count!

Callsign	Name	Confirmed	
		All	Active
N4XO	David A. Rawley	371	331
WA8WV	Dave Ellis	342	331
K4MD	Joe Simpkins	339	330
N4MM	John Kanode	359	330
AA4S	Ron Bailey	349	329
K4BVQ	Frank Dowd	369	329
K4CEB	Larry Sossoman	357	329
K4YYL	Art Balz	360	329
W4MBD	Bob McNeill II	343	329
W4MPY	Wayne Carroll	338	329
W4VHF	Ted Goldthorpe	342	329
W4WMQ	Murphy Ratterree	342	329
AA4R	Bill Parris	344	328
AK4N	Grady Robinson	337	328
K4SE	Bob May	341	328
K4SI	Bob Cranford	334	328
W4UW	Richard Genaille	340	328
K4MQG	Gary Dixon	363	327
W4JFK	John Kenney	338	326
W4ZV	Bill Tippet	367	326
AA4V	Steve Reichlyn	345	325
K4DJ	Richard Moser	355	325
K4DY	Les Murphy	354	325
K4HJE	E.V. Hicks	353	325
K4PYT	James Nipper	334	325
N4ZC	Roger Burt	354	325
W4CZU	Bud Brown	340	325
K0SD	Stephen Budensiek	338	324
WA4PLR	Pete Eldridge	333	323
K4ZA	Don Daso	328	322
W4IX	Jerry Hagen	356	322
WA4OBO	Ken Winston	333	322
K4QVK	Arlin Wilson	330	317
N4PQX	Bob Burton	312	310
KA8FSM	John Scott	158	158

### Adventures of Millie and Mike

Mike Farad, our intrepid radiophile, had arrived early for the radio club meeting. He had been using his newfound tool for circuit analysis, the Thevenin's Equivalent Circuit. (See Installment One of this series in the April, 2000 edition of The Pileup—Ed.) Mike had reduced a complex circuit to its simplest form using Thevenin's Theorem and was wrestling with trying to compute the value of a load resistor to which his driving circuit would deliver the maximum power. His resultant circuit looked like Figure 1, below.

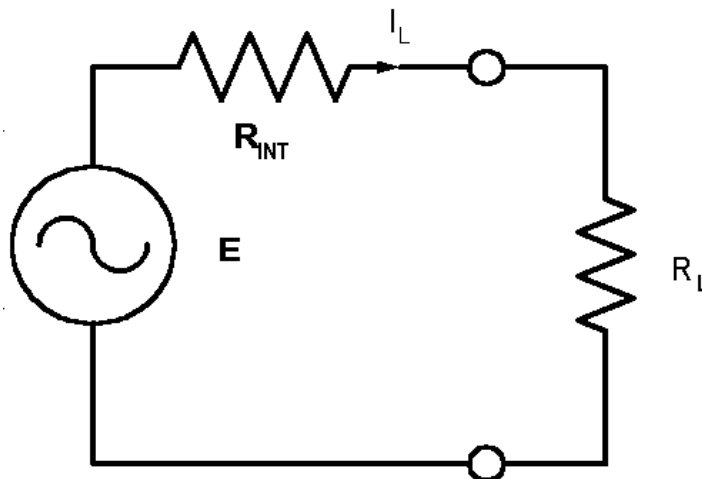


Figure 1 - Mike's Circuit Diagram

"The current in the circuit equals the driving voltage, E, divided by the sum of the two resistors,  $R_{INT}$  and  $R_L$ , in the circuit path," he mused to himself. " $R_{INT}$  is, of course, the internal resistance of my driving source device. The power in the load resistor equals the square of the current through the load resistor times the value of the load resistor." He was pleased that he remembered the equations of electronics he learned while completing his recent license upgrade. "So, the power in the load resistor would be given by this equation." He wrote down the following equation:

$$P_L = (E / (R_{INT} + R_L))^2 R_L$$

"OK. The power in the load is always positive," reasoned Mike. "If  $R_L$  moves toward zero, so does  $P_L$ . Yet if  $R_L$  goes toward an infinite number,  $P_L$  also goes toward zero. I know this because as  $R_L$  gets bigger and bigger,  $P_L$  is approximately equal to  $E^2/R_L$  and  $E^2$  is a constant."

Mike drew a logical conclusion. "If  $P_L$  is always positive, yet it goes to zero as the load resistor gets real small or real large, then there must be a value of  $R_L$  in between zero and infinity for which  $P_L$  reaches a maximum!" He almost screamed 'Eureka' in the tradition of Archimedes, but he knew he did not yet have the answer. He wanted to know the precise value of the load resistor which would create that maximum.

Members of the radio club began showing up for the meeting. "Whatcha doin'?" It was Millie Henry, Mike's regular contact

(Continued on page 4)

(Continued from page 3)

on the local 2-meter repeater during his morning commute.

"I've always wondered what the relationship was between a load resistor and the driving circuit to deliver maximum power to the load, and I've developed these equations using old man Thevenin's equivalent circuit." Mike knew Millie would be pleased that he remembered their earlier discussion about Thevenin's equivalent circuit.

"This is a classic maxima/minima problem from differential calculus," offered Millie.

"You know, Millie, it's been so long since my college calculus class, I almost forgot," beamed Mike. "If I take the first derivative of  $P_L$  with respect to  $R_L$ , set it equal to zero, and solve for  $R_L$ , I should get the value of  $R_L$  which maximizes  $P_L$ , right?" Millie nodded. Mike was on a roll!

Mike and Millie consulted their dusty memories and managed to get the first derivative and set it equal to zero. After reducing their equations to lowest terms, their result was:

$$R_L = R_{INT}$$

"Oh my gosh," gasped Mike. "We've been using this relationship intuitively for years when we do antenna matching. We always try to make the antenna impedance match the rig to ensure maximum power is delivered. Now we've proved why!" (Editor—Mike left his work papers with me. If you would like to see the details, let me know.)

**Stay tuned for "The Continuing Adventures of Millie and Mike"....**

### New Web Doings

Jerry Moore, AE4PB, our diligent Webmeister is putting some new features on our web site, such as editing your own membership information, that will require you to have your own personal password. Please pick a password of your choice and send it to Jerry via email or snailmail. Jerry's email address is on the website.

### Biographical Sketch - John Devoldere

John Devoldere, ON4UN, will need no introduction to those who are active on the low bands or in contesting, where his station is often activated using the call sign OTxT. John holds an engineering degree in electronics, and took early retirement in 1996 after a 30 year career with a major telecommunications company, where he held various management positions. A ham for about 40 years, John also holds an Extra Class license in the USA (AA4OI). ON4UN is actively involved in Amateur Radio society matters, and serves as president of the UBA, the Belgian IARU member-society.

Aside from being active on the DX scene on the low (as well as other) bands, John and his station are very active in international DX contesting. John feels that contests are the place where you can find out how good your station (antenna) really is. John holds a range of prestigious contest awards and plaques, including a group of "winner" plaques for CQ 160-meter DX (CW) contests, ARRL 80-meter contests and various other CQWW (Phone and CW) contests.

John's station is operated as a club station during international contests; dozens of guest operators from all over the world have operated from his station during these contests. Elected to the CQ Contest Hall of Fame in 1997, John is, above all, a very keen CW and contest operator.

On 160 meters John has worked more than 280 countries and has the highest country score outside the USA. On Top Band, John also holds the prestigious WAZ (award #3), as well as WAS, which is certainly not easy from Europe. On 80 meters, ON4UN has 345 confirmed countries (all-time) and heads the DXCC listing worldwide. He also holds 80-meter DXCC #1.

These outstanding results are certainly not the result of pure luck. They are brought about by a professional approach, which John shares with readers of his new book. Being retired now, John had the opportunity to spend more than 1000 hours over a one-year period rewriting *ON4UN's Low-Band DXing*, known far and wide as the "low-bander's bible".

## BORN LOSER

by Art Sanson



### CDXA Paraphernalia

The people at Land's End have completed preparing a program to embroider the CDXA logo on any of the items in the Corporate Sales catalog. Items available include knit shirts, denim shirts, cotton sweaters, duffle bags, hats, sweatshirts, squall jackets, and many other items. Some new items in the latest catalog are oxford cloth and chambray shirts. The cost of applying the logo is \$5.30 per item as long as **at least** six items of the same type are ordered. For example, a knit shirt and denim shirt are the same type of item. The total cost is the cost of the item, plus the cost of the logo application, plus shipping which can be prorated over an order for multiple items all shipped to the same address. One of a kind may be ordered, but the embroidery fee is doubled to \$10.60.

With our rather wide geographical distribution of members, Land's End can accommodate our ordering as a group by setting up a "window" of say three weeks during which they will accept orders of one or more item types to ensure at least six items of a type are ordered. They will accept faxes, phone calls, or letters, your personal credit card, and drop ship the finished item directly to your QTH. At the conclusion of the ordering window, they will execute the order based on orders received. In this mode, each will bear the shipping charges. Alternatively, we can assemble a group order at the luncheon meeting or via phone and send it in as a single order to save shipping charges. This mode, however, requires an order coordinator, and the orders would have to be picked up at our luncheons or elsewhere so the coordinator does not become a shipping clerk. Also, for the coordinator's benefit, "no money, no shirtee"!

The wide variety of clothing fabrics, colors, and styles suggests we ought to pick a few standard items to ensure we get six items in the same category. I've assembled an order of denim shirts for a few of the officers and others who expressed early interest. I hope to have them in time for John Devoldere's (ON4UN) visit for all to see. I will bring a catalog to the luncheon meetings over the next few weeks to see if we can gain a consensus for a group order. Then perhaps Jerry Moore can get an image put up on the website for those farther away to see various choices. Oh, yes, our "secret" logo number must be provided to Land's End when ordering to prevent "non-official" use of our logo. We'll make it available for the asking. —John Scott, KA8FSM

### Whizbang Website/Software

Ted Goldthorpe writes, "Check out this website for review. For members of CDXA who do not have logging software, download this animal and you're fixed. I've had this site bookmarked for years." The URL is:

<http://www.qsl.net/ea6vq>

The logging software Ted refers to can be found under "software" on this site. The logging program is written in Mi-

crosoft Excel, so if you have that, you can use the software for free. Seems as though our Spanish friend from Mallorca, Gabriel Sampol, just plain likes to write software. His is a fun site to visit. With the mention of grid squares being operative in the software, those of you who are VHFers may wish to look this one over.

### Antenna Modeling Software

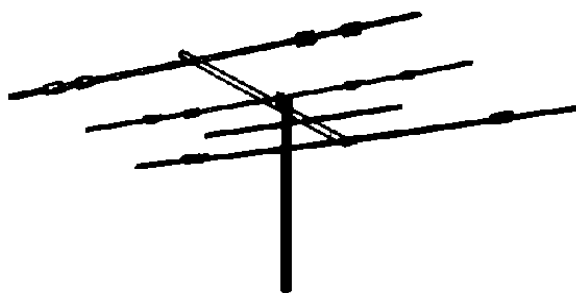
Last month's Pileup talked about Don Crain's review of antenna modeling software at the Charlotte Hamfest. With the impending arrival of John Devoldere, I should mention that John speaks highly of the value of said modeling tools in his book. So much so, that last year after buying the book, I had the world of antenna modeling using variants of MININEC opened to my then limited world.

I have a crazy loop antenna in the attic of my QTH somewhat imposed on my by local deed restrictions. I was curious just what my antenna far-field pattern might look like. A few minutes searching the web using "mininec" as a locator turned up a wealth of information. There are a number of tools available. You can take your pick.

One site attracted me because it offered a thirty day free trial download of a windows-based version of a modeling tool, NEC4WIN95. This was beyond my ability to resist. After 30 days, the registry entries will not allow you to run this program, but you probably will wish to buy it by then! Visit the following URL to download your trial copy:

<http://www.orionmicro.com/n4w95/n95page.html>

There are some cautionary notes in using this and other software modeling tools to ensure you get results from the tools which are realistic. Remember, they are MODELING the real world. The limitations are usually discussed with each tool. However, I found this particular tool very easy to use with only a modicum of study. The graphical outputs are wonderful, and the 3-D plots are outstanding. If you'd like a taste of today's modeling tools, here's one site you should visit.



## The Back Page

Be sure to mark your calendars for May 15 to attend the presentation by John Devoldere, ON4UN. The meeting will be held in Fort Mill, SC at the Assembly Center, 111 Academy Street starting at 7:30 P.M. Inside this newsletter is a short biographical sketch of John taken from the back page of his book, Low Band DXing. Those who have looked over John's book will agree that the material therein is far more germane to all of ham radio than just the low bands. I'm told that John will be happy to sign copies of his book for those who bring their personal copy. Unless he runs out at earlier speaking venues on his way toward Dayton, he may have some copies available at the event, but I'd not count on it!

CDXA official badges are just around the corner. You'll have the convenience of web-based ordering, if you please. Read Bob Burton's "Ponderings" for more details.

You'll also soon have an opportunity to sport your own CDXA logo on some sportswear of your choice. Land's End has completed preparing our logo for embroidering on articles of clothing, hats, duffle bags, and the like. We expect to have a few denim shirts being worn by some "early adopters" at the ON4UN presentation for those who would like an "eyeball" view of the goods. We're keeping our fingers crossed the production schedules will permit that.

See the note inside about picking your personal password to enable some new features being prepared for our website.

Ron Bailey has some neat plans for using the WY2000 callsign in the upcoming CQ WPX contest. See page 2.

Pssst! This publication is available by the CDXA website about 5 days before you get it in the mail, and it will cost the treasury less if you eventually choose that method of delivery.

---

**John Scott, KA8FSM**  
**16212 Walcot Lane**  
**Cornelius, NC 28031**

**jascott@ix.netcom.com**

## First Class Mail

*See something wrong with your address label? Notify KA8FSM at once, please.*